Meeting record Panel discussion

Date of Meeting: September 2, 2016

Meeting Time: 14:55-15:55

1. Panelists:

- **Dr. Ortwin Renn (IASS)**
- **Prof. Jonathan Wiener (Duke U.)**
- **Dr. Noriyuki Suzuki(NIES)**

2. Organizer:

- **Prof. Akihiro Tokai (Osaka U.)**

3. Registrar:

- **Dr. Xue and Robert (Osaka U.)**

4. Meeting Agenda:

(1) Briefly report on round table discussions.

Dr. Kojima (Group #1) and Dr. Zhou (Group #2)

(2) First round discussion

(3) Discussion with Floor

(4) Second round discussion, short range and long range

(5) Wrapping up

5. Meeting Notes:

(1) Briefly report on round table discussions

i) Report by Dr. Kojima for group 1 in round table discussion

In the first round discussion, the main viewpoint was classified into three groups: harmonization, improving risk assessment, and complexity with future expanding globalization. For harmonization, TPP, SPA, APEC promote this but very slowly. Culture and social difference are obstacle for harmonization. We need to learn from past since we have made some advance. For improving risk assessment, there is a need of simplification and expansion. On the other hand, there is also a need of integration and sophistication. For globalization, the system is increasingly complex. The international flow, all the supply chain, problem crossing the border, risk transfer should be considered.

In the second round discussion, some new viewpoints were added. We should share the protocol. Another challenge is that we got different output even when assess the same substance. What is the benefit for harmonization? How to identify? Animals should be

replaced by test tube and computers. We need a database to which everyone can get access to.

ii) Report by Dr. Zhou for group 2 in round table discussion

The main viewpoints are about the conflict, cross board supply chain, and sharing information (for detailed discussion, please refer to the roundtable discussion record).

(2) First round discussion (Topic and keyword only)

Prof. Tokai: We firstly focus on the Q.1 & Q.2 (at page 114 in the booklet). Do you (who are panelists) have additional comments?

Note: The points of the Q.1 & Q.2 are what change concerning about the risk assessment and management will be happen, and what scenarios we should prepare for.

Dr. Suzuki:

Keywords: Globalization of supply chain and life cycle, New chemicals which have higher functionality and the higher activity/toxicity, What risk is the target or countervailing.

Dr. Renn:

Keywords: Distinguishing of and different managing of new chemicals and old chemicals, Chemical interaction, Risk maps, Global monitoring of material flow, Considering the demographics, Immediate versus long term impact, Nano technology, 3D printing, Digitized manufacturing use new types of materials with different composition. Protocol.

Prof. Wiener:

Keywords: 3D printing, Decentralization of manufacturing of chemicals, Not chemical but biology production. Monitoring the management information. Laws and chemical regulations.

(3) Discussion based on the question from floor (Topic and keyword only)

Prof. Tokai: "Many questions appeared at once. How do the government deal with them?"

These are important points. So is there and comments to this comment (asking the panelist)?

Dr. Suzuki:

Keywords: Need to develop the chemical analytical method, Database of past risk assessment as a meta-risk assessment, Nature and social scientists must collaboration.

Dr. Renn:

Keywords: Control system, Need to be educated about protocol, Trusted testing.

Prof. Wiener:

Keywords: Non-animal testing, Reporting information, Monitor into the decentralized production, Similar to computer error reporting, Information system, Information challenge.

(4) Second round discussion, short range and long range (Topic and keyword only)

Prof. Tokai:

Today, with great pleasure, there are three experienced experts who are different department: social science, jurisprudence, engineering. I would like to ask three experts about the requirement to experts in other departments.

Dr. Suzuki

Keywords: Not for chemical assessment for management, Uncertainty, Relation between the types of uncertainty and the way of management. ”Known knowns” and “Unknown unknowns”, How to utilize the scientific research results

Dr. Renn

Keywords: Stochastic science. Distribution, Statistical analysis, Probability, Education of our risk managers. Limits of uncertainty analysis, Lack of knowledge.

Prof. Wiener

Keywords: Uncertainty. Decision under certainty and uncertainty. Facing uncertainty does not mean that we know nothing. Precautionary principle. Opportunity for learning.

(5) Wrapping up

Prof. Tokai:

There is no time for question 3 and question 4, however we discussed them yesterday. Why do we do risk assessment? We protect human health and ecosystem to survive.